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EXAMINER

ZIMMERMAN, BRIAN A

ART UNIT	PAPER NUMBER
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2635

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Please find below and/or attached an Office communication concerning this application or proceeding.

2

Office Action Summary

Application No.

10/064,380

Applicant(s)

BEIGEL ET AL.

Examiner

Brian A Zimmerman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 May 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-80 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-80 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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EXAMINER'S RESPONSE

Status of Application

In response to the applicant's amendment received on 5/29/03. The examiner has considered the new presentation of claims and applicant arguments in view of the disclosure and the present state of the prior art. And it is the examiner's position that claims 1-80 remain unpatentable for the reasons set forth in this office action:

DETAILED ACTION

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the two-winding transformer associated with each transistor of claim 40 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

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1. Claims 20-24 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Regarding claims 20-24, the specification does not describe the specific weighted integrations claimed.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

2. Claims 32-35 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 32, the terms "the data sequence", "the tag data" and "the data group" lack proper antecedent basis in the claim. Claims 33-35 are dependent on claim 32, include all the limitations of claim 32, yet do not correct the error addressed above, and are therefore rejected for the same reasons.

Regarding claim 33, this claim is confusing. It is confusing since it is defined that the synchronizing bits are part of a preamble and the preamble contains other elements, then how can it be determined that the received synchronizing bits are the preamble.

Claim Rejections - 35 USC § 102

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The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) The invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. Claims 32 and 72 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Waraksa (4942393).

Waraksa shows a reader that receives data from a tag. The reader receives a data sequence transmitted by the tag, see figure 9. The data sequence includes a synch sequence, an identity code tag data and error bits. The error bits are used to determine if the received sequence is 'correct' or 'incorrect'. See col. 5 lines 55+.

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4. Claims 36-40 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Buchele (5276910).

Buchele shows a reader with a coil 190, a capacitor 160 coupled to the coil. Buchele also shows the reader to include a means to drive the coil including four FETs arranged in a bridge to recycle the energy of the driver circuitry, see col. 3 lines 10+.

5. Claims 70,71,73-80 are rejected under 35 U.S.C. 102(e) as being unpatentable over Carroll (5517194).

Carroll shows a method of interrogating a tag by generating an alternating magnetic field. See col. 7 lines 5-15. The reader sends data to the tag preceded by a bit timing clock signal. See figure 4b. The tag sends a signal to the reader that includes data that is preceded by bit timing clock signal.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that

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the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary.

Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 1,3,41,43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chatelot (4864633) and Kurusu (3587017).

Chatelot shows a reader for communicating to a "tag", see figure 2. Chatelot shows the reader including a coil 13, a capacitor 19, a means for coupling the capacitor to the coil 24, a means to drive the coil with a driving signal 37, a mean to generate the driving signal 36, and a means to extract data from the tag 22. Chatelot does not expressly show connecting the capacitor to the coil and other circuits using a transformer.

In an analogous art, Kurusu shows a transformer connecting a capacitor 21 and other circuits to the antenna 11. The transformer provides isolation between the antenna coil and the other circuits. Kurusu shows the relationships of the coil, capacitor and extractor circuit and the first and second windings of the transformer.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have used a transformer in the Chatelot system to

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provide isolation between the communication antenna coil and the other circuits in the reader as suggested by Kurusu.

7. Claims 1,2,4,41,42,44,45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chatelot (4864633) and Ogita (4278980).

Chatelot shows a reader for communicating to a "tag", see figure 2. Chatelot shows the reader including a coil 13, a capacitor 19, a means for coupling the capacitor to the coil 24, a means to drive the coil with a driving signal 37, a mean to generate the driving signal 36, and a means to extract data from the tag 22. Chatelot does not expressly show connecting the capacitor to the coil and other circuits using a transformer.

In an analogous art, Ogita shows a transformer connecting a capacitor 34 and other circuits 37,38,39 to the coil 21. The transformer provides isolation between the antenna coil and the other circuits see col. 5 lines 10+.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have used a transformer in the Chatelot system to provide isolation between the communication antenna coil and the other circuits in the reader as suggested by Ogita.

8. Claims 5-13,25-31,47,48,50-60,62-64 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carroll (5517194).

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Carroll shows a reader 10 which includes a coil 18, a means for driving the coil 16, a means for generating a driving signal 12 and means to embed bit-timing in the driving signal by transmission of synchronization 114 (figure 4b). Carroll also shows embedding a sequence of data bit to be communicated to the tag as work 118. Carroll does not expressly show a capacitor for coupling the coil and the driving means in the reader. Carroll does show in the transponder or tag, that the use of a capacitor 44 between the coil 42 and the transmission driver 72 can provide tuning. See col. 20 lines 14+. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have used a capacitor between the coil and the transmission driver to provide tuning.

Regarding claims 6-11,57-60 Carroll shows the use of PSK. It is well understood that PSK is a modulation technique where the phase of the carrier signal is modified in accordance with data (here the driving sequence) to convey ones and zeros.

Regarding claims 12,13,25-31,61-64 Carroll also shows the use of FSK. It is well understood that FSK is a modulation technique where the frequency of the carrier signal is modified in accordance with data (here the driving sequence) to convey ones and zeros.

9. Claims 34 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Waraksa (4942393) as applied to claims 32 and 33 above, and further in view of Batz (4839642).

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In an analogous art, Batz shows storing the received bits and replacing the oldest bit in memory with the next received bits, see figure 6 and col. 14 lines 42+. This provides a simple way of sorting the received signal into sync, data and error bits.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have used shift registers in the Waraksa system in order to provide a simple way of sorting the received signal for decoding.

10. Claims 49 and 69 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carroll (5517194) as applied to claims 47 and 56 above, and further in view of what is common in the art.

The Examiner takes Official Notice that amplitude shift keying is a common alternative to phase shift keying or frequency shift keying, and to have substituted this type of modulation scheme for that used in Carroll would not have involved an unobvious step.

11. Claims 14-17, 61, 64-68 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carroll (5517194) as applied to claims 5 and 56 above, and further in view of McFarlane (3223779).

In an analogous art, McFarlane shows a communication system that communicates using both FSK and PSK to increase bandwidth see figure 2a. Much like QPSK, this would provide 4 different (or orthogonal) keyed combinations to transmit data that can be called "00" "01" "10" "11". Therefore, it

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would have been obvious to one of ordinary skill in the art at the time of the invention to have used both FSK and PSK simultaneously in the Carroll in order to increase the bandwidth of the system.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

12. Claims 36-40,70-80 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 16 of U.S. Patent No. 5235326 in view of Carroll. Although the conflicting claims are not identical, they are not patentably distinct from each other. Patented claim 16 shows the use of a modulated magnetic field to interrogate a tag and receive data from the tag. In an analogous art, Carroll shows the use of an interrogation system to send packeted data with synch and error fields in addition to a data field in order to provide timing and error control for asynchronous communication.

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Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have used the packet format of Carroll in the Patented claim 16 interrogator system in order to provide timing and error control for asynchronous communication.

Response to Arguments

Applicant's arguments filed 5/29/03 have been fully considered but they are not persuasive.

Regarding the 112 rejections of claims 20-24. The applicant argues that since the subject matter of claims 20-24 is well known the present application does not need to disclose it. The applicant then proceeds to cite reference material listing where such information can be found. The applicant's conclusion is incorrect. All claimed subject matter must be supported by the disclosure. An incorporation by reference can be made for some subject matter, however explicit disclosure is required for essential (claimed) subject matter. Furthermore, the applicant's argument is evidence that the subject matter of claims 20-24 is well known.

Regarding the 112 rejections of claims 32-35. After considering the applicant's arguments, the question remains whether the said data sequence refers to the same data as discussed above. If it is the applicant's intent that the

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sequence is inherent then it only causes confusion in this instance and should be removed in order to further understanding and clarity if the applicant desires clear, non-confusing claims. The use of different abbreviated phrases to refer to the term "tag data group of T bits" is confusing. It can be explained that the terms "tag data" and "data group" can point to the term "tag data group of T bits" however the arbitrary and inconsistent use of these terms to mean the same feature causes confusion in the claims and should be removed in order to further understanding and clarity if the applicant desires clear, non-confusing claims.

Regarding the 112 rejections of claim 33. Appropriate punctuation of claim 33 would improve clarity. It is suggested that the use of a semi colon to separate the term "message comprises" and the term "a preamble" would concisely set forth limitations how the applicant has argued. Without such a semi colon, other interpretations of the claim are possible.

Regarding the 102 rejection of claim 32. The applicant argues (1) that Waraksa does not disclose, "sync sequence of an arbitrary sequence of data bits." This is not claimed in that the claim does not include an arbitrary sequence. Furthermore, decoding this sequence of bits is not claimed. Waraksa discloses an S-bit sync sequence in the preamble as claimed. 101010 as disclosed by Waraksa includes "1" and "0", these binary outputs are considered bits. The applicant argues (2) that Waraksa does not show the data and error groups possibly including false sequences. This is only claimed as a possible

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feature, and as such is not interpreted as a positive limitation. Furthermore, regarding arguments 1 and 2, these limitations only exist in the preamble and are not given weight since it does not breath life and meaning into the claim. MPEP 2111.02. The recitations have not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951). The applicant argues (3) that Waraksa does not disclose receiving the sync pattern as data bits. The limitation in question does not set forth receiving sync data bits. This limitation (like many others the applicant argues) is broader in scope than the applicant argues. The applicant cannot import limitations into the claim that are not present. The limitation here requires receiving the data sequence transmitted by the tag. This is shown in that the receiver receives the Miller encoded code word. Furthermore, it is noted that the claims do not require decoding the received sequence and could therefore also read on Waraksa's receiving of the sync data sequence. The applicant argues (4) that Waraksa does not utilize sync sequences made of ordinary data bits. It is noted that this is not claimed. Ordinary data bits is neither claimed nor defined by the applicant. The claim limitation is that the reader detects each sync sequence. Since the reader of Waraksa must detect the sync sequence in order for proper operation

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of the system, it reads on the claim. Here again it is pointed out that detection is what the claim requires, not decoding. The applicant argues (5) that Waraksa does not examine all data bits and identify a sync sequence. This has nothing to do with the limitation in question (or any other limitation that exists in claim 32). The limitation that the applicant points to requires a means to identify the preamble. The preamble of Waraksa includes the sync sequence. Because Waraksa detects the sync sequence, the preamble is identified. The applicant argues (6) that Waraksa does not where the data bits are. Waraksa uses the sync sequence as a preamble to pre-empt the data sequence, therefore it is known by Waraksa that the data sequence follows the sync sequence. The applicant argues that the structure disclosed by Waraksa does not meet the means plus function rules for anticipating the claimed device. Once the reference has been determined to show the claimed functions of a means plus function claim, a determination as to the structure must be made. The applicant discloses a microprocessor where the reference shows a microcomputer. These are more than equivalent in that a microcomputer is a microprocessor with some additional memory to perform the computing. The applicant then argues that Waraksa's microcomputer does not operate bit-by-bit. This is not an argument of different structure but an argument of different operating functions performed. We cannot read function limitations into a means plus function element, and since this bit-by-bit comparison function has not been claimed it is not afforded weight in the claims.

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Regarding the 102 rejection of claim 72. Responses to these arguments can be found in the discussion of claim 32 above.

Regarding the 102 rejection of claim 36. The applicant argues that the claim should be given proper consideration under 35 USC 112 sixth paragraph and since not all of the disclosed structure is shown by Buchele the rejection should be withdrawn. MPEP 2181 sets forth the elements of a claim that must be met before a claim should be considered a means plus function claim.

A claim limitation will be interpreted to invoke 35 U.S.C. 112, sixth paragraph if it meets the following 3-prong analysis:

- (A) the claim limitations must use the phrase "means for" or "step for";
- (B) the "means for" or "step for" must be modified by functional language; and
- (C) the phrase "means for" or "step for" must not be modified by structure, material or acts for achieving the specified function.

Claim 36 fails to meet element C above because the means is significantly modified by structure. Therefore, only the structure specifically set forth in the claims is given weight and the examiner has pointed out that Buchele teaches these limitations. Furthermore, the applicant's comments appear to support the examiner's position that the claimed elements are taught by the reference.

Regarding the 102 rejections of claims 37,38,40. Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references.

Regarding the 102 rejection of claim 70. The applicant argues that Carroll does not disclose embedding a bit timing clock signal in the alternating magnetic field. The applicant does not seem to question the alternating magnetic field carrier of this limitation. Element 102 (Carroll) is a 4-bit time sync. block, see col. 15 lines 15+. The claims require bit timing clock signal. The applicant argues the bits in the sync block of Carroll are all zeros and are therefore not a bit timing clock signal. Since Carroll's bit timing clock sequence provides timing for the bit clock 60 it meets the limitation claimed. Furthermore, the claims do not require bit and timing clock "data".

Regarding the 102 rejection of claim 71. The applicant argues (1) that Carroll does not include a tag that responds by transmitting a bit timing clock signal synchronized to the bit timing clock signal from the interrogator. The sync signal that is generated in element 70 of Carroll is a bit timing clock signal. Furthermore, the recitation (1) has not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951). The applicant argues (2) that the tag does not transmit a bit timing clock

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signal. The sync signal that is generated in element 70 of Carroll is a bit timing clock signal. The applicant argues (3) that the tag does not transmit the bit timing clock signal. The sync signal that is generated in element 70 of Carroll is a bit timing clock signal and is transmitted through the PSK modulator. The applicant argues (4) that the bit timing clock signal is not used to aid in extracting data from the response signal. It is noted that the interrogator receiving the response from the tag uses the bit timing clock signal generated by element 70 in order to properly receive and decode the response.

Regarding the 102 rejection of claim 73. The applicant argues that Carroll does not show maintaining the resonating circuit in resonance. This feature is inherent to any receiver that is attempting to receive data on a carrier (which Carroll does). If any such device does not stay "tuned" to the resonant frequency the data would not be received.

Regarding the 102 rejection of claim 74. The applicant argues (1) that the reader does not embed a bit timing clock signal into the alternating magnetic field. Element 102 (Carroll) is a 4-bit time sync. block, see col. 15 lines 15+. The claims require bit timing clock signal. Furthermore, this has not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process

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steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951). The applicant argues (2) that the bit timing clock signal is not synchronized to the bit timing clock signal from the interrogator. The sync generator 70 is synchronized to the received clock signal since the timing control element 60 drives all the elements that follow, etc 64,48,68 and 70. The applicant argues (3) that Carroll does not use weighted integration to identify the bit period. Dividing by 64 is weighted integration for providing the claimed feature. The applicant argues (4) that the Carroll does not identify the bit transmitted during a period using weighted integration. Element 62 does use the weighted integration to identify the incoming data.

Regarding the 102 rejection of claim 75. The applicant argues (1) that Carroll does not show a bit-timing signal in the signal from the reader. . Element 102 (Carroll) is a 4-bit time sync. block, see col. 15 lines 15+. The claims require bit timing clock signal. Furthermore, this has not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951). The applicant argues (2) that the bit timing clock signal is not

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synchronized to the bit timing clock signal from the interrogator. The sync generator 70 is synchronized to the received clock signal since the timing control element 60 drives all the elements that follow, etc 64,48,68 and 70. The applicant argues (3) that Carroll does not show the tag modulating the field to send a sequence of bits to the reader where the start of each is determined by the bit timing clock signal. First, as taught by Carroll it is noted that the data following a bit timing sequence provides the claimed feature. Furthermore, the bit-timing signal of the reader is used to provide the control of half duplex communication, which would govern the start of each transmission.

Regarding the 102 rejection of claim 76. The applicant argues (1 and 2) that Carroll does not disclose extracting the bit timing clock signal from the carrier generated by the interrogator. Elements 58 and 60 extract the bit timing clock signal from the carrier generated by the interrogator. The applicant argues (3) that the bit timing clock signal is not synchronized to the bit timing clock signal from the interrogator. The sync generator 70 is synchronized to the received clock signal since the timing control element 60 drives all the elements that follow, etc 64,48,68 and 70. The applicant argues (4) that Carroll does not show the tag modulating the field to send a sequence of bits to the reader where the start of each is determined by the bit timing clock signal. First, as taught by Carroll it is noted that the data following a bit timing sequence provides the claimed feature. Furthermore, the bit-timing signal of the reader is used to

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provide the control of half duplex communication, which would govern the start of each transmission.

Regarding the 102 rejection of claim 77. The applicant argues (1 and 2) that Carroll does not disclose extracting the bit timing clock signal from the carrier generated by the interrogator. Elements 58 and 60 extract the bit timing clock signal from the carrier generated by the interrogator. The applicant argues (3) that Carroll does not use weighted integration to identify the bit period. Dividing by 64 is weighted integration for providing the claimed feature. The applicant argues (4) that the Carroll does not identify the bit transmitted during a period using weighted integration. Element 62 does use the weighted integration to identify the incoming data.

Regarding the 102 rejections of claims 78-80. Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references.

Regarding the 103 rejections of claim 1 (Chatelot and Kurusu) or (Chatelot and Ogita). The applicant argues that there is nothing in Chatelot that suggests the substitution of a transformer for the direct connections of capacitor 19 to coil 13. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be

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established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the examiner has pointed out general knowledge that a transformer coupling provides isolation between circuits.

Regarding the 103 rejections of claim 2-4 (Chatelot and Kurusu or Ogita). Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references.

Regarding the 103 rejections of claim 41 (Chatelot and Kurusu or Ogita). The applicants argue that Chatelot does not show the limitations of element 1. This appears to be the only argument for this claim (with this rejection). One cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

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Regarding the 103 rejections of claim 42-45 (Chatelot and Kurusu or Ogita). Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references.

Regarding the 103 rejection of claim 5 (Carroll). The applicant argues that Carroll does not teach all the claimed subject matter. It is pointed out that Carroll is not cited for teaching each and every element as claimed. The applicant failed to appreciate the teachings of Carroll. The applicant ignored the application of Carroll as discussed in the OBVIOUSNESS rejection set forth in the Office Action.

Regarding the 103 rejections of claims 6-11 (Carroll). The applicant argues that Carroll does not have a reader sending PSK data to the tag. While Carroll does in fact teach using FSK to communicate data to the tag, Carroll also teaches the use of PSK to transmit data. It is well within the skill in the art to choose between transmission encoding schemes to provide optimal transmission methods. Does the applicant actually believe that they invented the use of PSK in a communication system?

Regarding the 103 rejections of claims 12,13,25 (Carroll). The applicant argues that Carroll does not transmit a periodic signal having a first frequency to

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represent a "0" and a second frequency to represent a "0". What the applicant claims is FSK. Carroll discloses FSK for the claimed link between the reader and the tag.

Regarding the 103 rejections of claims 26-31 (Carroll). Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references.

Regarding the 103 rejection of claim 47 (Carroll). The applicant argues that Carroll does not include a tag that generates a bit clock signal synchronized to the received reader's bit timing signal. . The sync generator 70 is synchronized to the received clock signal since the timing control element 60 drives all the elements that follow, etc 64,48,68 and 70. The applicant argues that the Carroll does not identify the bit transmitted during a period using weighted integration. Element 62 does use the weighted integration to identify the incoming data.

Regarding the 103 rejections of claims 48 (Carroll). Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without

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specifically pointing out how the language of the claims patentably distinguishes them from the references.

Regarding the 103 rejection of claims 49,50 (Carroll). The applicant argues that Carroll does not use weighted integration to identify the bit period. Dividing by 64 is weighted integration for providing the claimed feature.

Regarding the 103 rejections of claims 51-55 (Carroll). Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references.

Regarding the 103 rejections of claim 56 (Carroll). The applicant argues that Carroll does not teach all the claimed subject matter. It is pointed out that Carroll is not cited for teaching each and every element as claimed. The applicant failed to appreciate the teachings of Carroll. The applicant ignored the application of Carroll as discussed in the OBVIOUSNESS rejection set forth in the Office Action.

Regarding the 103 rejections of claims 57-60 (Carroll). The applicant argues that the use of Manchester coded PSK is not a teaching of the claim 57 limitation, claim 57 being used as a representative example in this section. The

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applicant is incorrect. As described by the applicant on page 55 of the response (5/29/03) Manchester coded PSK includes a first phase in the first bit portion when a "0" is transmitted and a second phase in the first bit portion when a "1" is transmitted. The claim require a first phase for a "0" and a second phase for a "1" but does not require that the phase be constant for the entire bit period. Here again the applicant is attempting to further limit the claims by unfairly "interpreting" limitations into the claims, which simply are not present.

Regarding the 103 rejections of claims 62-64 (Carroll). The applicant argues that Carroll does not include generating a first frequency to represent a "0" and a second frequency to represent a "1", and then modulating the the driving signal with this periodic signal. Here again the applicant is attempting to further limit the claims by unfairly "interpreting" limitations into the claims, which simply are not present. Modulating an already generated FSK signal is not claimed. Claim 62 for example modulates the driving signal with a first frequency to represent a "0" and modulates with a second frequency to represent a "1", this is the definition of FSK which is shown by Carroll.

Regarding the 103 rejection of claim 69 (Carroll). The applicant argues that Carroll does not teach all the claimed subject matter. It is pointed out that Carroll is not cited for teaching each and every element as claimed. The applicant failed to appreciate the teachings of Carroll. The applicant ignored the application of Carroll as discussed in the OBVIOUSNESS rejection set forth in

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the Office Action. Furthermore, Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references. Repeating the claim and arguing, "the references do not show the claimed subject matter" amounts to a general allegation.

Regarding the 103 rejection of claim 14-17,61,64-68 (Carroll and McFarlane). The applicant argues that McFarlane's modulation technique does not teach the limitation of claim 15. McFarlane teaches exactly what is claimed, see figure 2a. the first time portion represents a "00" transmission, which is represented by f2 with a zero phase offset, next follows "10" which is represented by f1 with zero phase offset, then follows "11" represented by f1 with a non-zero phase offset and then "01" represented by f2 with a non-zero phase offset. The applicant argues that there is no suggestion in Carroll to desire increased bandwidth and therefore there is no motivation to combine. Carroll shows the reading a writing of data too and from tags (transponders), this requires a certain amount of bandwidth. To increase the amount of data that can be sent too and from tags for the purpose of reading more tags or sending more data more bandwidth would be required. Therefore, contrary to applicant's argument, it is generally desirable to those in the art to increase the bandwidth of communication systems. McFarlane teaches a combined FSK/PSK system for just that (increasing bandwidth).

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Regarding the Double Patenting rejection of claims 36-40,70-80 (Biegel '326 and Carroll). The applicant argues that since claim 16 of Beigel '326 includes limitations that are not present in the pending claims, the pending claims cannot be obvious variations of claim 16. It has been held that broader claims in a later application constitute obvious double patenting of narrow claims in an issued patent. See *In re Van Ornum and Stang*, 214, USPQ 761, 766, and 767 (CCPA) (the court sustained an obvious double patenting rejection of generic claims in a continuation application over narrower species claims in an issued patent); *In re Vogel*, 164 USPQ 619, 622, and 623 (CCPA 1970) (generic application claim specifying "meat" is obvious double patenting of narrow patent claim specifying "pork").

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will

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the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian A Zimmerman whose telephone number is 703-305-4796. The examiner can normally be reached on Off every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mike Horabik can be reached on 703-305-4704. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4700.

Brian A Zimmerman
Primary Examiner
Art Unit 2635

BaZ
August 8, 2003